# Presentation for the Public Safety & Homeland Security Bureau

## December 10, 2009

# Core Purposes of NG9-1-1

- Utilize broadband-enabled, IP-based technologies to fully replace E9-1-1 system with all core functionalities and capabilities of current E9-1-1 system
- Add capabilities to support 9-1-1 access in multiple formats for all current/emerging originating service providers in secure environment
- Add increased flexibility for PSAPs/9-1-1 governing authorities
- Add capabilities to enable interoperable information sharing with all organizations involved in emergency response (including shared infrastructure/services)

# NG9-1-1 Introduces New Elements

- Location Validation Function: LVF
- New routing determination function : Emergency Call Routing Function (ECRF)
- New routing element: Emergency Services Routing Proxy (ESRP)
- New element to hold location: Location Information Server (LIS)
- New security element: Border Control Function
- And gateways from legacy wireline/wireless networks to the ESInet

# Current NENA NG9-1-1 Focus

- Concentrating on completing development and publication of NENA documents required to provide standardization and interoperability for `baseline' NG9-1-1 features and functions
- Much more work required after baseline development accomplished,  which will include national testing of baseline NG9-1-1 and further development of the full version of NG9-1-1
- Significant focus on transition stage
- Significant focus on state/federal policy issues

# Baseline NG91-1

- Comprised of all features and functions required to replicate current E9-1-1 service…
- Plus those features and functions for management of the service and support for current or near future NG9-1-1 capabilities that E9-1-1 cannot handle
- Will support basic transport, routing, and control of voice and non-voice messaging and related data, but will not be able to fully support more advanced multi-media that depend on originating provider standards not yet defined by their SDOs

# Baseline NG9-1-1

- Depends on originating provider network interfaces that are defined and in use for other purposes, but must be negotiated with carriers and/or their vendors for new types of NG9-1-1 applications

# Recent Activity

- Progress in NENA standards development
  - Several standards complete
  - Several major core NG9-1-1 standards slated for approval in early 2010 (IP functions and interfaces ("i3") stage 3 design, NG Security, IP-capable PSAP minimum operational requirements update, and several system operations/database standards)

- Some pre-NG9-1-1 early deployments and planning/implementation of IP-backbone networks; IP network and equipment development

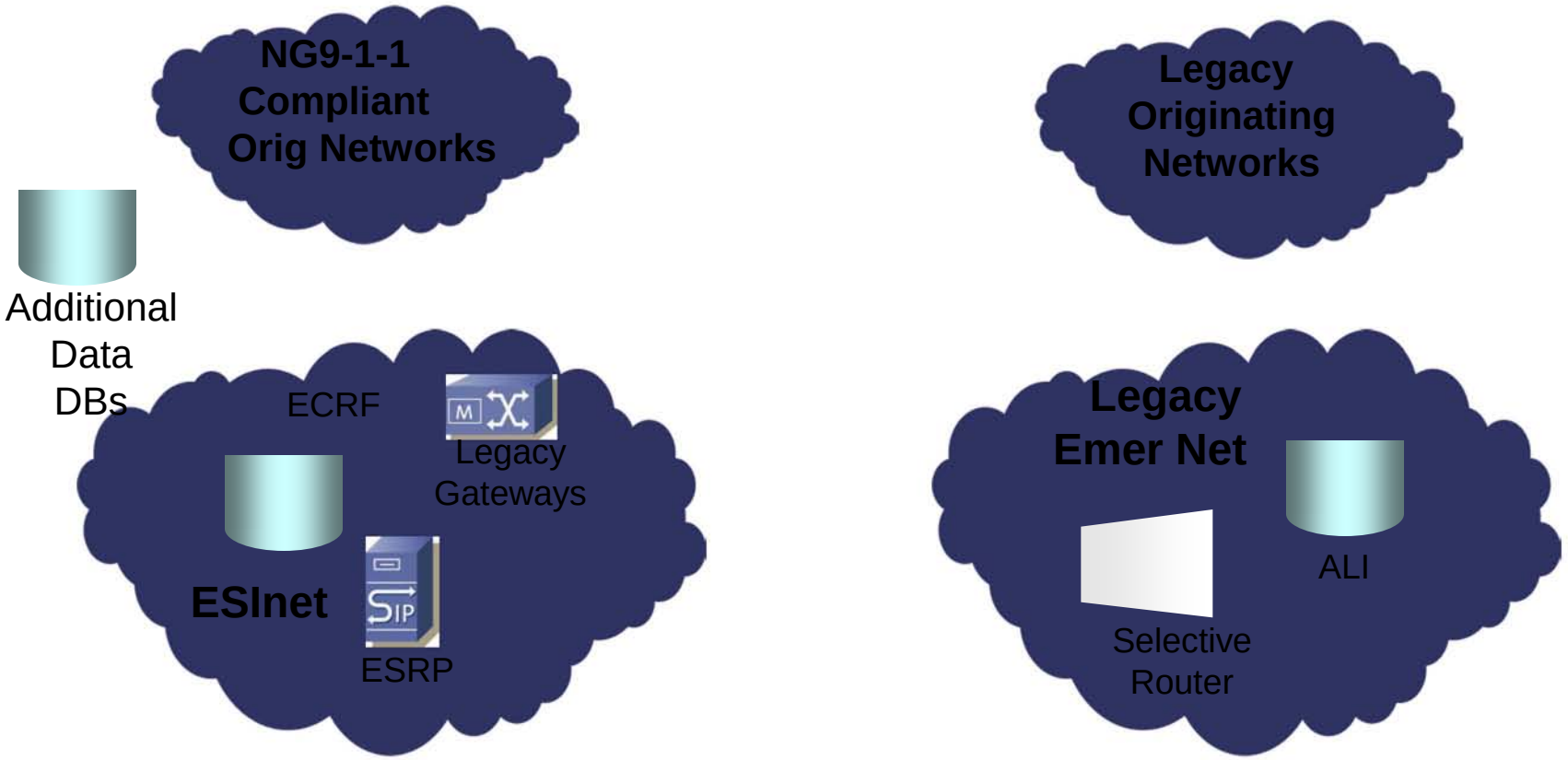
- Successful NENA NG9-1-1 Industry Collaboration Event (ICE)

- Ongoing transition to IP-based E9-1-1 systems as catalyst to full NG9-1-1 systems
  - Unclear state statutory/regulatory structure; need for state and federal regulatory certainty in IP environment

# Evolution Approaches

- NG9-1-1 Evolution Approaches
  - **Coordinated, Intergovernmental Approach:**
    - Top Down approach
    - Statewide or regional coordination
  - **Independent, Unilateral Approach:**
    - Independent initiatives by PSAP Jurisdictions or 9-1-1 Authorities
  - In either case Legacy Emergency Networks and NG9-1-1 Networks will coexist

# Coexistence of Legacy and NG9-1-1 Networks






NG9-1-1 PSAPs Dual Mode PSAPs Legacy PSAPs

# So what can the FCC do?

# National Broadband Plan

Plan should articulate that it is the policy of the United States to enable NG9-1-1 and foster the migration from analog, voice-centric 9-1-1 and emergency communications systems into a broadband-enabled 21st century, IP-based emergency services model

# National Broadband Plan

- Focus on all forms of broadband for public safety
- Recognize that access to publicly available broadband networks alone is insufficient
  - Need for managed Emergency Services IP networks (ESInets)
- Address public safety broadband funding challenges
  - Need for recurring, annual, non-raidable funding source; not just grants
- Address federal and state regulatory uncertainty delaying rollout of IP-based E9-1-1 and NG9-1-1 systems
- Address emergency communications as an overall enterprise, not separate functions (9-1-1, first responders, health, etc.)
  - Avoid single-purpose networks; embrace shared networks/systems
  - Address emergency communications as an overall
- Address public safety broadband demand challenges
  - Enabling NG9-1-1, mobile broadband applications increases overall demand

# Other

- Consider opening an NG9-1-1 Docket
- Consider initiating a “9-1-1 competition” proceeding
- As appropriate, address location technology issues, originating service provider responsibilities
- Ensure managed systems in NG9-1-1, priority access for emergency communications, not prohibited by net neutrality rules

# Questions?